

Remarks

Reconsideration of remaining claims 1-13, 16-20, and 22-24, as well as newly-presented claims 49 and 50, is respectfully requested.

In the Office action dated June 21, 2005, the Examiner rejected the pending claims under 35 USC § 103(a). The Examiner's various rejections will be discussed below in the order appearing in the Office action.

35 USC § 103(a) Rejection - Claims 1-13, 15-19 and 24

Claims 1-13, 15-19 and 24 were first rejected by the Examiner under 35 USC 103(a) as being unpatentable over US Published Application 2003/0118306 (Deliwala), in view of US Patent 3,883,221 (Rigrod). In the rejection, the Examiner stated that "Deliwala discloses an optical device limitations set forth in the claims of the instant application, except it does not explicitly teach the use of a cavity formed *within the base surface* of a prism coupler". The Examiner then went on to state that "[o]n the other hand, Rigrod explicitly teaches a prism coupler having at least one cavity (plurality of cavities) formed within the base surface of the prism....Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the device of Deliwala to a cavity formed *within the base surface* of a prism coupler, as taught by Rigrod".

In response, applicants assert that Rigrod is limited in its teaching to the use of a grating, not "a cavity", the Rigrod structure "having a grating periodicity such that a beam of light incident on the grating from inside the prism is internally diffracted essentially completely in a backward direction" (column 2, lines 24-28). The Rigrod reference requires the use of such a periodic structure to couple light into a thin-film light guide - in a backward direction.

The present invention, unlike Rigrod, does not use a "grating" to enable the coupling. Rather, a "cavity", with corner edges, is formed to promote the truncation of an incoming beam such that essentially all of the signal is coupled into the surface

waveguide. A periodic structure, such as a grating, is not used or intended to be used, in the arrangement of the present invention.

Based on these significant differences, therefore, applicants assert that the combination of Deliwala and Rigrod cannot be found to render obvious the subject matter of the present invention as defined by the above-cited claims. Applicants thus respectfully request the Examiner to reconsider this rejection and find the claims (as amended) to be in condition for allowance.

35 USC § 103(a) Rejection - Claims 20, 22 and 23

Claims 20, 22 and 23 were next rejected by the Examiner under 35 USC 103(a) as being unpatentable over the combination of Deliwala and Rigrod (as above), when considered with US Patent 6,021,239 (Minami et al.). The Examiner particularly cited Minami et al. as teaching the use of trapezoidal prism couplers in an optical coupling arrangement. As discussed above, however, applicants believe that the combination of Deliwala and Rigrod remains lacking in teaching the use of a “cavity” to truncate the incoming beam, as defined by claim 1 (Rigrod being limited to teaching the use of a *periodic structure*, such as grating). No “periodic structure” is defined by the rejected claims. Without the teaching of the use of a cavity, the combination of Minami et al., Deliwala and Rigrod cannot be found to render obvious the teachings of the present invention as defined by claims 20, 22 and 23. Applicants thus respectfully request the Examiner to reconsider this rejection and find claims 20, 22 and 23.

Claims 49 and 50 have been added to this application to further define an advantage of including a “cavity” in the base surface of the coupling prism, in terms of facilitating the attachment of the prism to the SOI wafer. The Examiner is directed to paragraphs [0017], [0057] and [0060] to find support for this amendment.

In summary, applicants have amended various claims to overcome the Examiner’s rejections. Claims 49 and 50 have been added for consideration by the Examiner. Applicants believe that the case, in its present form, is now in condition for allowance and respectfully requests a response from the Examiner in that regard. If for some reason

or other the Examiner does not believe that the case is ready to issue and that an interview or telephone conversation would further the prosecution, the Examiner is invited to contact applicants' attorney at the telephone number listed below.

Respectfully submitted,

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